ABSTRACT

EFFICIENT CONNECTIVITY BETWEEN MULTIPLE TOPOLOGY SUBNETS VIA COMMON CONNECTION NETWORK

An improved technique is disclosed for routing data across multiple topology subnets, and for improving the connectivity between nodes in multiple topology subnets, by using a common connection network. A new type of virtual node, referred to herein as a "global" virtual routing node or "GVRN", is defined to represent connectivity to an underlying network that may extend beyond the boundaries of the topology subnets in the end-to-end path. This underlying network is also referred to as a "common connection network" or a "global connection network". The present invention also defines novel techniques with which border nodes pass routing information between networks to convey connectivity to the GVRN. In many cases, use of GVRNs will result in shorter end-to-end data transmission paths.